

CLAIMS:

1. A fiber optic display system, comprising:
 - a) a viewing screen secured within a housing, said viewing screen having a screen surface for generating optical real time images;
 - b) an array of pixels forming said screen surface, wherein said screen surface has a first pixel density and each pixel in said array of pixels is formed by a bundle of one or more optical fibers, each of said fibers having a first end and a second end;
 - c) light source means having a second pixel density for producing light comprising an image, said light source means being adapted to receive said second end of said optical fibers;
 - d) wherein said array of pixels are arranged in a predetermined order for displaying the image produced by said light source on said viewing screen; and
 - e) wherein an image generated by said light source means is partitioned into an array of pixel planes together forming a three dimensional matrix of pixels what is W pixels wide, H pixels high, and D pixels deep.
2. The system of claim 1 wherein the pixel density of said screen surface is greater than the pixel density of said light source means.
3. The system of claim 1 wherein said light source means is a homogeneous emitting light source.
4. The system of claim 1 wherein said light source means is a homogeneous projecting light source.
5. The system of claim 1 wherein said light source means is a heterogeneous combination of multiple homogeneous emitting and/or projecting light sources.

6. The system of claim 1 wherein said viewing screen and said light source means form a three-dimensional space.
7. The system of claim 6 wherein said light source means lie in close proximity to said viewing surface.
8. The system of claim 6 wherein said light source means are remotely located from said viewing surface.